

# Compass Big Blue, LLC

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**Recommendation for Cleanup Report  
Compass Big Blue Site Investigation  
(Old GST Steel Mill) Kansas City, MO**

**Compass Big Blue, LLC  
8116 Wilson Road  
Kansas City, MO 64125  
July 3, 2003**



R00416619  
RCRA RECORDS CENTER

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## **Table of Contents**

1. Introduction/ Purpose
2. Problem Definition/ Background
3. Project Description
4. Field Sample Collection
5. Results
6. Quality Assurance/ Quality Control
7. Recommendations for cleanup
8. Proposed Cleanup Levels
9. Evaluation of Cleanup Alternatives
  - a. Cost
10. Summary
11. Schedule

## **List of Tables**

- Table 1 - Soil Sample Results Compared to Standards  
Table 2 - Field QA/QC Results  
Table 3 - Comparative Summary of Alternative Costs for On-Site Soils

### **Analysis of Alternatives for On-Site Soil**

- Table 4 - General Standards for Corrective Measures  
Table 5 - Long-Term Reliability and Effectiveness  
Table 6 - Reduction of Toxicity, Mobility, or Volume of Wastes

## **Appendices**

- Appendix A - Site Map  
Appendix B - Drawing showing soil sample locations and areas of contamination  
which exceed cleanup action levels (SWMU 8 and 11, 25 and 26)  
Appendix C - Field Sampling Notes  
Appendix D - Pace Analytical Lab Report  
Appendix E - Photos

## **1. Introduction/ Purpose**

This report has been prepared by Compass Big Blue, LLC (CBB) for its site located at 8116 Wilson Rd. in Kansas City, MO. The proposed cleanup plan for contaminated soils located within CBB property, specifically SWMU's 8 and 11, 25 and 26 is identified herein. A variety of feasible remedial options contemplated for site clean up are summarized in this report. CBB will select a final remedy or remedies for the site based upon future reuse.

## **2. Problem Definition/Background**

The Site is located on approximately 300 acres in northeast Kansas City, Missouri. Land use in the vicinity of the Site is characterized by medium to heavy industrial activity. The property is zoned M2A Heavy Industrial by the city of Kansas City, Missouri. For over the past 100 years the site has been a steel production and manufacturing facility until operations ceased in 2001. Currently the site is undergoing demolition and remediation activities as part of future redevelopment.

Several SWMU's were identified during a RCRA Facility Investigation conducted by a former property owner, AK Steel, during the 1990's. Although the SWMU's were delineated no sound conclusions or remedies were derived from during the former investigations. Three SWMU's were identified on CBB property and were further delineated in June 2003. The SWMU's are herein referred to as SWMU 8 and 11, SWMU 25 and SWMU 26.

## **3. Project Description**

As directed by United States Environmental Protection Agency, Region VII ("EPA") Compass Big Blue conducted exploratory soil analyses in June 2003. The results were confirmed by an independent laboratory using samples obtained from the SWMU's located on its property located at 8116 Wilson Road, Kansas City, Missouri (the former GST Steel Mill). The samples were analyzed for ~~are~~ lead and cadmium. *based on*

*qualitative results of the RFI conducted by AK Steel*

## **4. Field Sample Collection**

### SWMU 8 and 11

Eighteen samples, including 2 field duplicates, were collected from this SWMU. Ten soil samples were collected from the railcar loading hopper area near the west bag house and six soil samples were collected from the railcar loading hopper area at the east bag house (see drawing showing sample locations Appendix B). Samples



were collected from the top two inches of soil at each location. One sample was collected from directly below hopper at east baghouse. Samples were then collected 10 ft from center in all four directions, N, E, S, and W. One additional sample was collected 20ft north of center. At west baghouse no sample collected directly below hopper due to asphalt covering. Samples collected from N, E, S, SW and NW of center immediately adjacent to asphalt. One additional sample collected 10 ft north of north edge of asphalt. One additional sample collected 10 ft NW of NW edge of asphalt. One additional sample collected 10 ft SW of SW edge of asphalt. Two additional samples collected south of south edge of asphalt. One sample 10 ft south of south edge of asphalt and one sample 15 ft south of south edge of asphalt.

Soil samples were collected by hand and placed into disposable aluminum pie pan and homogenized. Composite soil samples collected from an area approx. 2 by 2 feet in size and 0 to 2 inches below ground surface. Three aliquots collected from three widely distributed locations within each sampling location. Approximately 100 grams of soil collected from each aliquot location. The three soil sample aliquots placed in disposable aluminum pie pan and homogenized. After the sample had been homogenized it was put into sample container to go to lab.

Sampling personnel changed outer gloves between samples to minimize the possibility of cross-contamination. Aluminum pie pans were disposed of in proper container after each sample collected (see field sampling notes Appendix C).

#### SWMU 25

No samples collected at this SWMU because the delineated area of impact as well as the area 50 feet beyond the SWMU is covered by asphalt .(See SWMU drawing Appendix B)

#### SWMU 26

No samples collected at this SWMU because of asphalt covering SWMU and surrounding area 50 feet and beyond in all directions.(See SWMU drawing Appendix B)

## 5. Results

The action level for lead is 2,000 mg/kg, based on EPA's Adult Lead Model. Of the 18 soil samples collected, 8 exceeded 2,000 mg/kg for lead. They include five samples from SWMU 8 and 11 west baghouse and three samples from east baghouse. Pace Analytical Lab Report (Appendix D).

**Table 1**  
**Soil Sample Results**

Parameter	Standard based on EPA Adult Lead Model (mg/kg)	Samples which exceed Standard	Sample Depth	Sample Result (mg/kg)
Lead, Total	2,000	BHW – N	0-2"	5920
		BHW – E	0-2"	5490
		FB – 060603-2	0-2"	5360
		BHW – S	0-2"	7570
		BHW – S + 10'	0-2"	4920
		BHE – C	0-2"	3220
		BHE – N + 10'	0-2"	3740
		BHE - S	0-2"	3400
		Samples below Standard		
		BHW – N + 10'	0-2"	361
		BHW – S + 15'	0-2"	792
		BHW – SW	0-2"	1790
		BHW – SW + 10'	0-2"	425
		BHW – NW	0-2"	1150
		BHW – NW + 10'	0-2"	271
		BHE – N	0-2"	1070
		BHE – E	0-2"	932
		BHE – W	0-2"	474
		FB – 060603 - 1	0-2"	489

## 6. Quality Assurance/ Quality Control

Pace Analytical QA/QC data included in final lab report (Appendix D). Field QA/QC results are within acceptable range. Sample FB – 060603-2 collected at sample location BHW – E. Sample FB – 060603-1 collected at sample location BHE – W. The results are in table below:

**Table 2**  
**Field QA/QC Results**

Sample ID	Sample Result (mg/kg)	% Difference	Within acceptable QA/QC limit (+/- 35%)
BHW – E FB – 060603-2	5490 5360	2.37	Yes
BHE – W FB – 060603-1	474 489	3.16	Yes

## **7. Recommendations for Cleanup**

Based on the CBB investigation, the only contaminant of concern for soils at SWMU 8 and 11 is lead. Potential pathways of lead exposure to on site workers may be through incidental ingestion of impacted soil or dust. Lead concentrations in soils at SWMU 8 and 11 exceeded risk based levels at both the east and west baghouse railcar hopper loading areas. CBB recommends the cleanup of lead impacted soils in SWMU 8 and 11 where soils pose a risk to future on site workers. For the purposes of this report and further consideration, three cleanup alternatives are being contemplated. The alternatives are: no further action, capping, and excavation/removal and off-site disposal.

*potential*

## **8. Proposed Cleanup Levels**

The adult lead uptake-biokinetic model developed by EPA (1996) was used to determine potential risks to on-site workers for lead, and to calculate a final protective cleanup level. The referenced model assumes that the most sensitive worker populations, which may be exposed to lead, are pregnant women and women of childbearing age. It is assumed that the risk lies with the presumed potential for lead uptake by a fetus. Using the adult lead model, workers exposed to soils in areas within SWMU 8 and 11 may be subject to an unacceptable exposure to lead. The risk-based cleanup level for lead in on-site soils developed using the adult lead model is 2,000 ppm.

## 9. Evaluation of Cleanup Alternatives

Alternatives were analyzed to address on-site soils which pose an unacceptable risk to human health and/or the environment. The proposed remedy and alternatives were evaluated using four general standards for corrective measures and five selection decision factors. The general standards are overall protection of human health and the environment, attain media cleanup standards, control the sources of release, and comply with standards for management of wastes. The five selection decision factors are long-term reliability and effectiveness, reduction of toxicity, mobility, or volume of wastes, short term effectiveness, implementability, and cost. The following alternatives were considered for on-site soils:

- Alternative 1 – No Action
- Alternative 2 – Engineered Barrier / Institutional Controls SWMUS 25/26
- Alternative 3 – Excavation and Off-Site Disposal / Institutional Controls 25/26

SWMUS  
8/6/11

### A. Cost

A summary of the estimated costs of each alternative is presented below:

**Table 3**  
**Comparative Summary of Alternative Costs for On-Site Soils**

Alternative	Total Estimated Cost
1- No Action	N/A
2- Engineered Barrier	\$1,000 (aggregate) - \$6,500 (asphalt)
3- Excavation and Off-Site Disposal	\$10,500

The following tables present an analysis of each alternative relative to each of the four general standards.

\* Explain "Institutional Controls" for SWMUS 25/26  
use Missouri Registry

**Table 4**  
**Analysis of Alternatives for On-Site Soil**  
**General Standards for Corrective Measures**

<b>Alternative</b>	<b>Protection of Human Health and Environment</b>	<b>Attainability of Media Cleanup Standards</b>	<b>Controlling the Source of Releases</b>	<b>Compliance with Standards for Management of Wastes</b>
1: No Action	Does not protect human health and the environment.	Media cleanup standards would not be met.	Does not control source of releases.	No remediation waste would be generated.
2: Engineered Barrier / <i>Institutional Controls</i>	Engineered barrier eliminates ingestion of contaminated soils. Deed restriction indicates property may be used only for industrial use and prohibit ground breaking work in impacted areas.	Engineered barrier prevents contact with or ingestion of soils contaminated greater than media standards.	Controls sources of release with engineered barrier.	No remediation waste would be generated.
3: Excavation and Off-Site Disposal / <i>Institutional Controls</i>	Removal of contaminated soil would eliminate human exposures to soil contamination.	Media cleanup standards would be achieved by the removal of contaminants.	Source would be controlled by removal of contaminants.	Remediation waste would be generated and disposed of at appropriate off-site landfill.

**Table 5**  
**Analysis of Alternatives for On-Site Soil**  
**Long-Term Reliability and Effectiveness**

Alternative	Magnitude of Residual Risk	Potential for Future Exposure	Need for Replacement of Components	Long-Term Reliability and Effectiveness
1: No Action	Since no remedy would be implemented, the residual risk is the same as the present risk.	Potential future exposures would be the same as existing exposures.	N/A	N/A
2: Engineered Barrier / <i>Institutional Controls</i>	Reduces risk by creating a barrier which eliminates the soil ingestion pathway for human exposure.	Potential for future human exposures is limited by eliminating the soil ingestion pathway.	N/A	Asphalt capping is a proven and reliable technology. Periodic maintenance would be required. Aggregate capping would provide barrier from contamination but would not be as reliable as asphalt and require more maintenance.
3: Excavation and Off-Site Disposal / <i>Institutional Controls</i>	Reduces risk by removing contaminated soils, thus, eliminating the soil ingestion pathway for human exposure.	Potential for future human exposures is limited by eliminating the soil ingestion pathway.	N/A	Removing contaminated soil is a proven and reliable technology. Long term maintenance would not be required.

**Table 6**  
**Analysis for Alternatives for On-Site Soil**  
**Reduction of Toxicity, Mobility, or Volume of Wastes**

<b>Alternative</b>	<b>Treatment Processes Used and Materials Treated</b>	<b>Effectiveness of Destruction or Treatment</b>	<b>Degree of Expected Reduction of Constituents</b>	<b>Type of Residuals after Treatment</b>
1: No Action	No treatment processes will be used.	Does not destroy or treat constituents.	Would not reduce concentrations of constituents.	N/A
2: Engineered Barrier	No treatment processes will be used.	Does not destroy or treat constituents.	Would not reduce concentrations of constituents.	N/A
3: Excavation and Off-Site Disposal	Excavated soil may need to be stabilized in order to meet LDR's before disposal. Volume would increase, toxicity would decrease.	Excavated soils would be stabilized rather than treated in order to meet LDR's for disposal.	Excavation and treatment of contaminated soil would reduce concentrations of hazardous constituents present at the site.	Stabilized soils would be disposed at an approved landfill.

## 10. Summary

Based on the evaluation of alternatives conducted in the above tables, the proposed remedy, excavation and off-site disposal for on-site soil, best meets the evaluation criteria listed above.

The proposed remedy for on-site soil meets the criteria that it is protective of human health and the environment, controls sources of contaminant releases to the environment and prevents further releases from occurring, attains media cleanup standards, and complies with all applicable standards for the management of wastes.

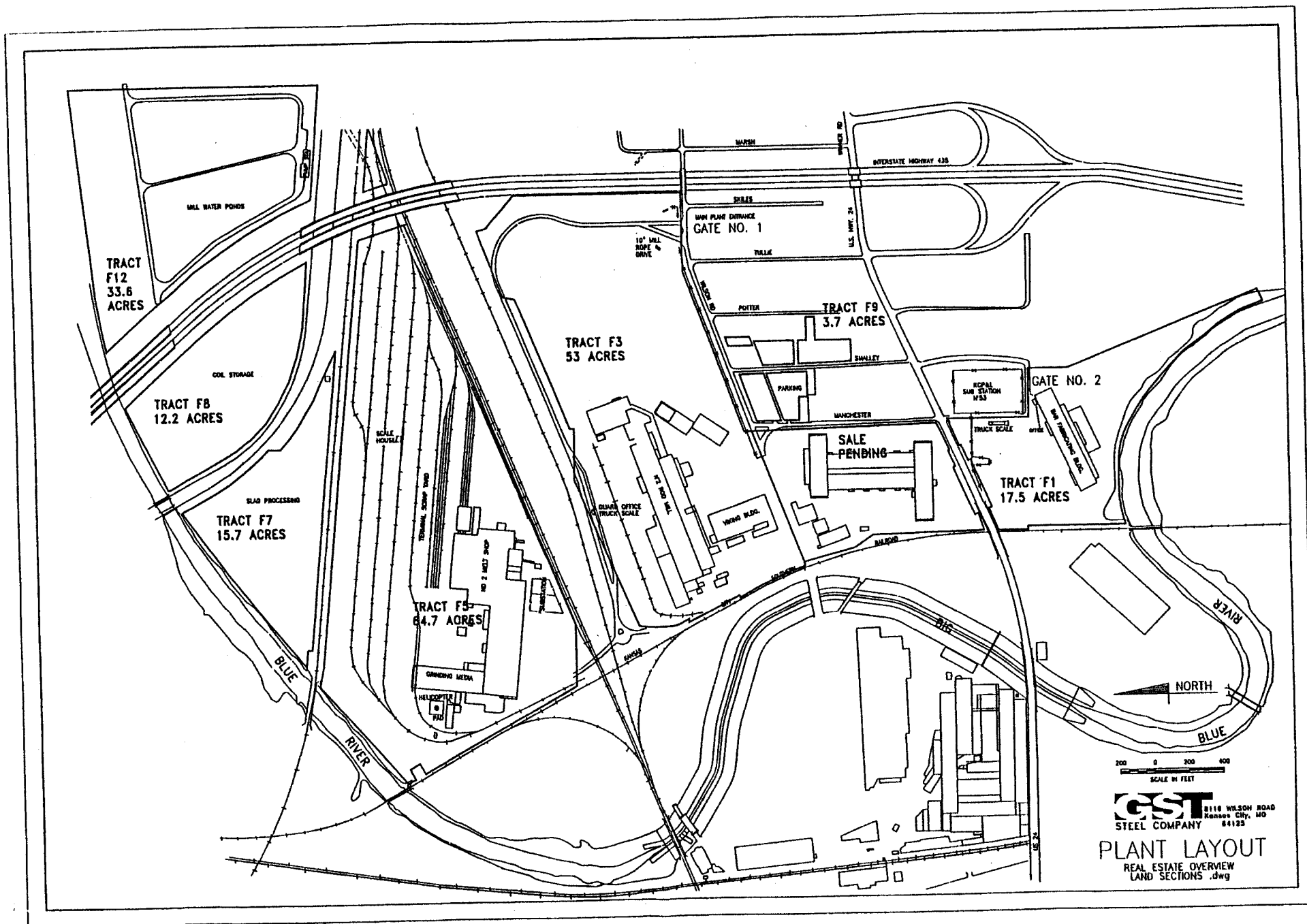
*Summus/ 8-11 and institutional controls for Summus 25626*

## **11. Schedule**

The excavation of on-site soils and loading into proper transportation containers to haul to off-site landfill will take two days. Work will begin upon further collaboration with EPA and CBB personnel.



Appendix A  
Site Map



200 0 200 400  
SCALE IN FEET

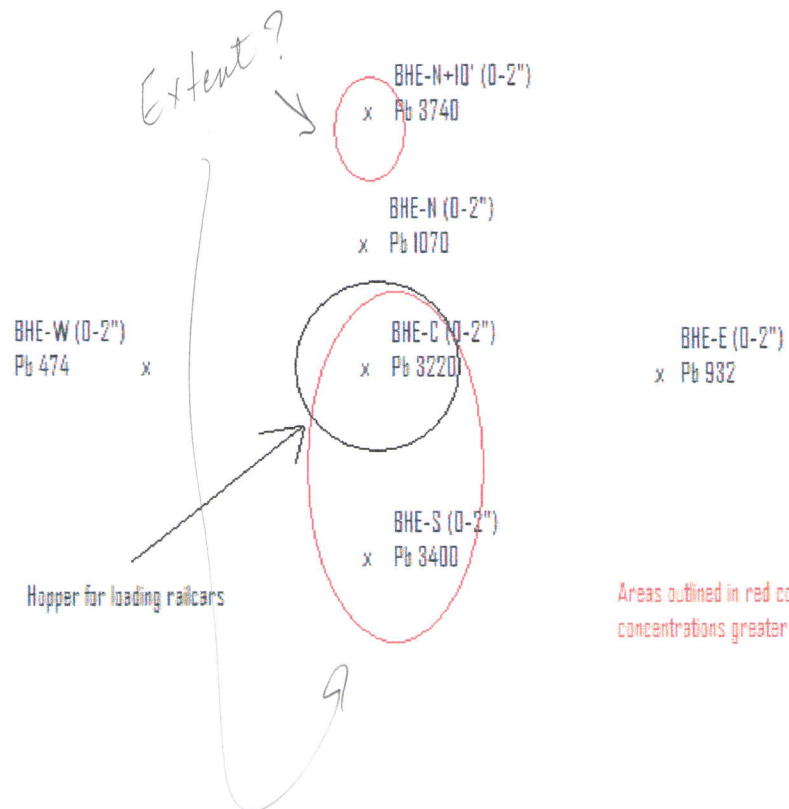
**CST**  
STEEL COMPANY  
2118 WILSON ROAD  
KANSAS CITY, MO 64125

**PLANT LAYOUT**  
REAL ESTATE OVERVIEW  
LAND SECTIONS .dwg



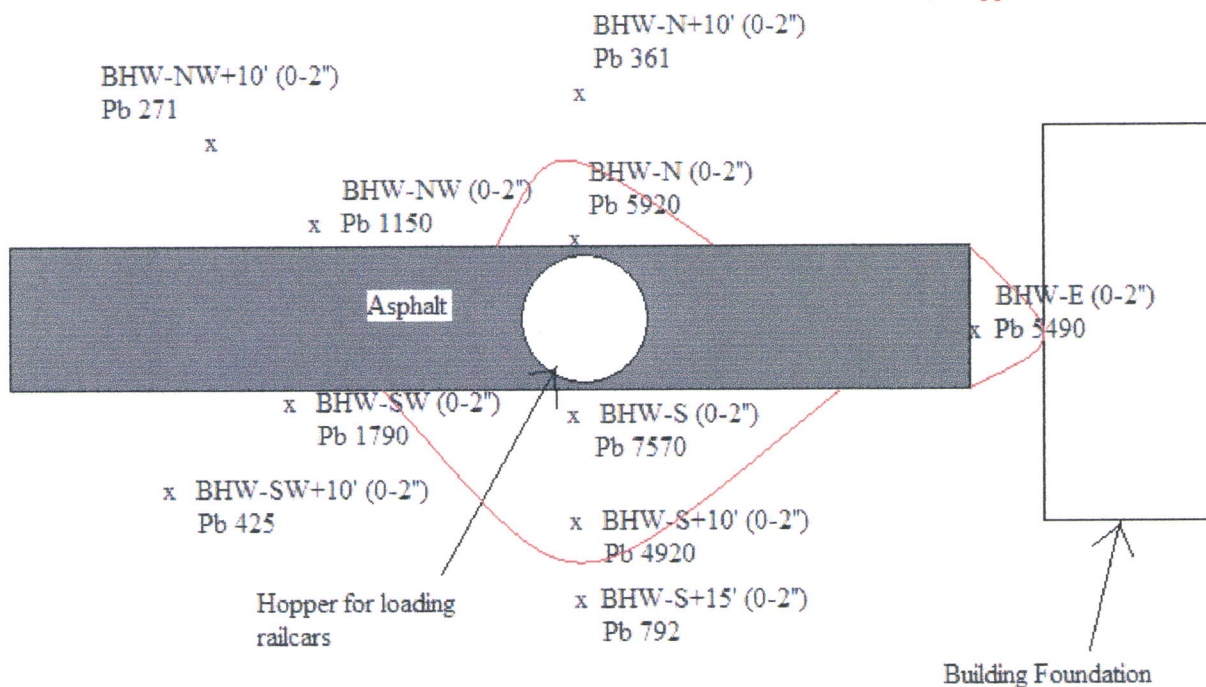
Appendix B  
Drawing showing soil sample locations and areas of contamination  
which exceed cleanup action levels (SWMU 8 and 11, 25 and 26)

East Baghouse Hopper  
SWMU B and II

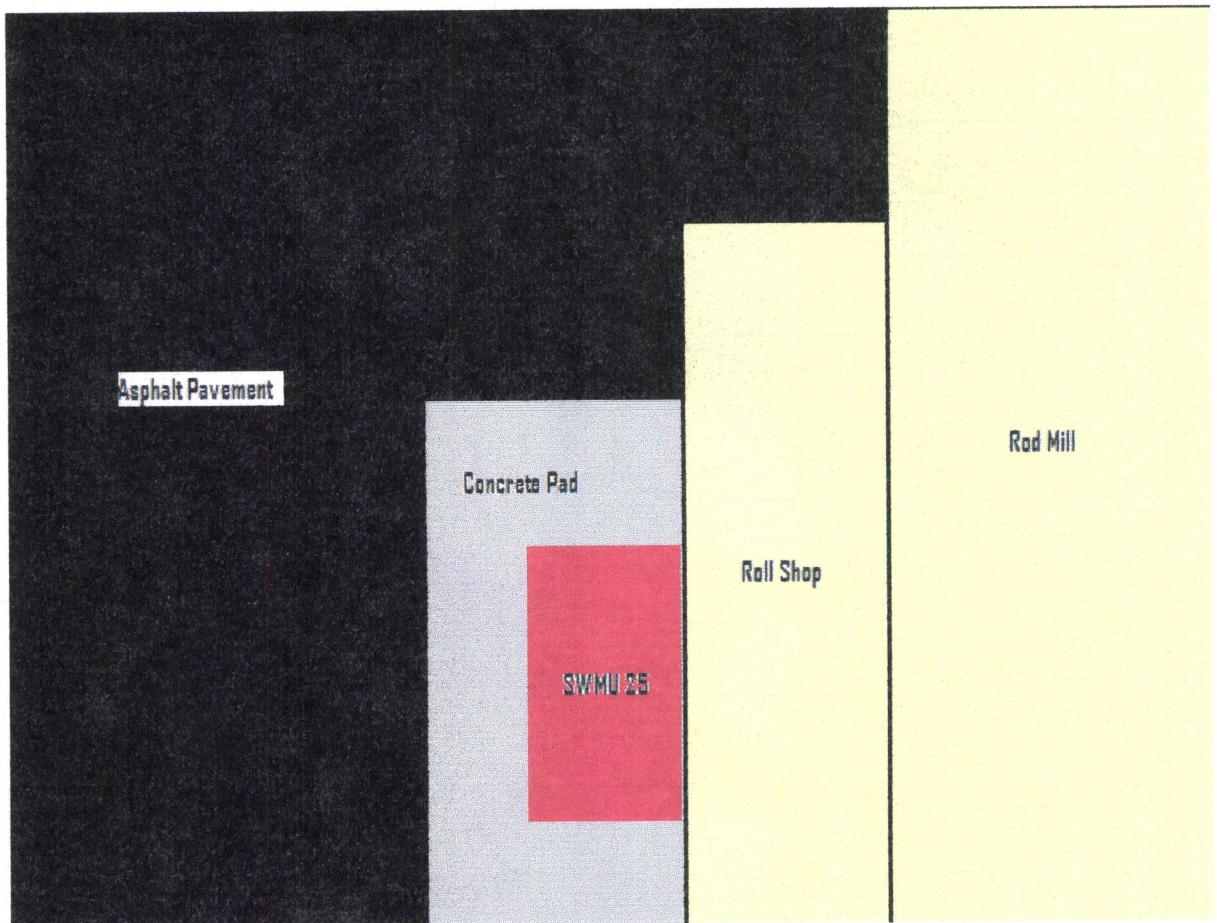


**West Baghouse Hopper  
SWMU 8 and 11**

Areas outlined in red  
contain soils with lead  
concentrations greater than  
2,000 ppm.







Rod Mill - SW corner

SWMU 26

Asphalt Pavement

Motor Control



Appendix C  
Field Sampling Notes



BHE-N (0-2")

46103

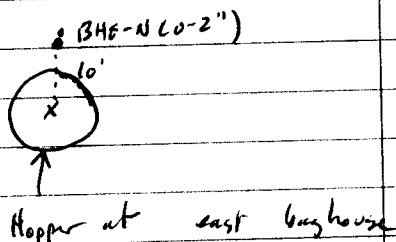
1000

Sampler :

Fite

Composite soil sample  
collected from 0-2" interval  
from area 10' north  
of hopper at east bughouse.

Representative soil from  
top 2" collected by  
hand and put into  
possible metal pie tray.  
Soil homogenized in pie  
tray and put into sample  
jar to go to lab.  
Gloves and pie tray  
disposed of properly.



~~MF~~  
~~Location (to 4")~~  
~~46103~~

BHE-E (0-2")

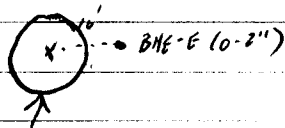
6/6/03

1015

Sampler:

Fritz

Composite soil sample collected  
from 0-2" interval from  
area 10' east of hopper  
at east bayhouse. Representative  
soil from top 2" collected  
by hand and put into  
disposable metal pie tray.  
Soil homogenized in pie  
tray then put into sample  
jar to go to lab.  
Gloves and pie tray  
disposed at property.



Hopper for loading  
railcars (east bh)

BHE - 5 (0-2")

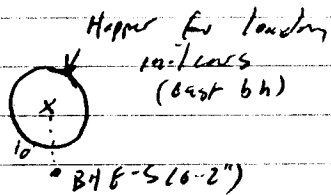
6/6/03

1030

Sampler:

Feltz

Composite soil sample collected  
from 0-2" interval from area  
16' south of hopper at  
east bungalow. Representative  
soil from top 2" collected  
by hand and put into  
disposable metal p.c. tray.  
Soil homogenized in p.c.  
tray then put into sample  
jar to go to lab.  
Gloves and p.c. tray  
disposed of properly.



BHE-W (0-2")

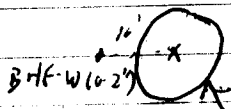
6/6/03

1045

Sampler:

Fr/12

Composite soil sample collected  
from 0-2" interval from  
area 10' west of hopper  
at east bayhouse.  
Representative soil from top  
2" collected by hand and  
put into disposable metal  
pic tray. Soil homogenized  
in pic tray then put into  
sample jar to go to lab.  
Gloves and pic tray  
disposed of properly.



Hopper for loading  
rail cars (east bh)

\* FB-060603-1 collected from this  
location 6/6/03 @ 1045

BHE - C (0-2")

6/6/03

1100

Sampler:

F110

Composite soil sample  
collected from 0-2" interval  
from area directly below  
hopper at east bayhouse.  
Representative soil from  
top 2" collected by hand  
and put into disposable  
metal pie tray. Soil  
homogenised in pie tray  
then put into sample  
jar to go to lab.  
Gloves and pie tray  
disposed of properly.

• BHE - C (0-2")

Hopper for loading  
on (1) cars (east BH)

BHE - N + 10' (0-2")

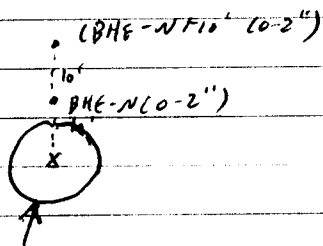
6/6/63

11/5

Sampler

Fr. 1/2

Composite soil sample  
collected from 0-2" interval  
from area 10' north of  
sample BHE-N (0-2") at  
east baghouse. Representative  
soil from top 2" collected  
by hand and put into  
disposable <sup>metal</sup> pie tray. Soil  
homogenized in pie tray  
then put into sample  
jar to go to lab.  
Gloves and pie tray  
disposed of properly.



Hopper for loading  
railcars at east BH.

BHW-N (0-2")

6/6/03

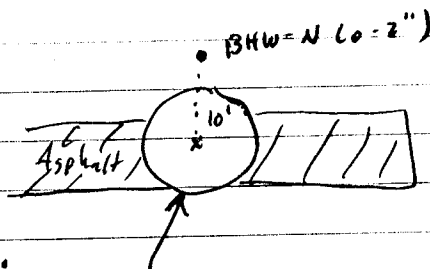
130

Sampler:

Grits

Composite soil sample collected  
from 0-2" interval from  
area 10' north of hopper  
at west bargehouse.

Representative soil from  
top 2" collected by  
hand and put into  
disposable metal pic tray. Soil  
homogenized in pic tray  
then put into sample  
jar to go to lab.  
Gloves and pic tray  
properly disposed of.



Hopper for loading  
railcars at west BH

BHW-E (0-2")

6/6/03

1145

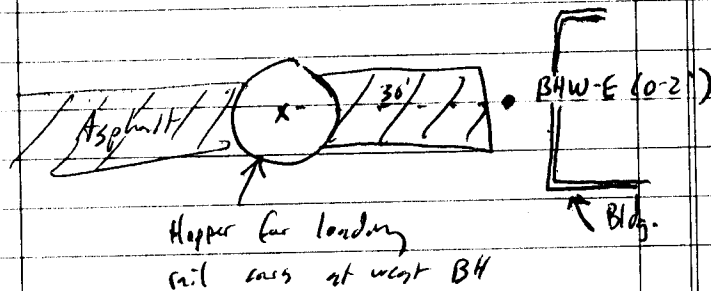
Sampler:

Forte

Composite soil sample  
collected from 0-2"  
interval from west

30' due to asphalt  
covering.

east of hopper at west  
bay house. Representative  
soil from top 2" collected  
by hand and put into  
disposable metal pie tray.  
Soil homogenized in pie  
tray then put into  
sample jar to go to lab.  
Gloves and pie tray  
properly disposed of.



\* FB-060603-2 (0-2") collected  
from same location 6/6/03 @ 1150



BHW-5 (0-2")

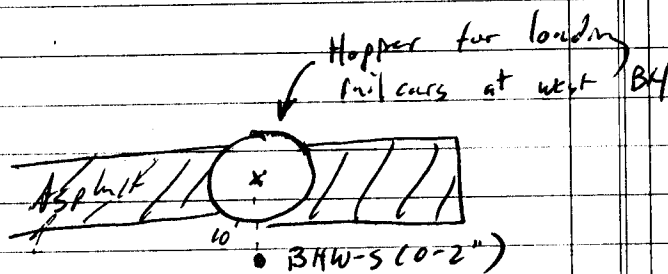
6/6/03

1200

Sampler:

F1.72

Composite soil sample collected  
from 0-2" interval from  
area 10' south of hopper  
for loading rail cars at  
west bargehouse. Representative  
soil from top 2" collected  
by hand and put into  
disposable metal pie tray.  
Soil homogenized in pie  
tray then put into sample  
jar to go to lab.  
Gloves and pie tray  
disposed of properly.



BHW-NW (0-2")

6/6/03

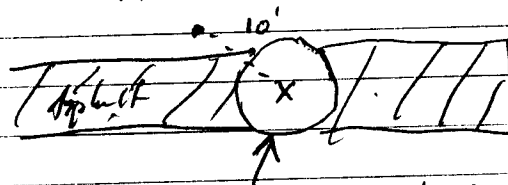
1245

Sampler:

Fritz

Composite soil sample  
collected from 0-2" interval  
from area 10' NW of  
hopper at west bghouse.  
Could not sample directly  
west because of asphalt.  
Representative soil from  
top 2" collected by hand  
and put into disposable  
metal pic tray. Soil  
homogenized in pic tray  
then put into sample  
jar to go to lab.  
Gloves and pic tray  
properly disposed of.

BHW-NW(0-2")



Hopper for loading  
railcars at west BH

BHW-SW (0-2")

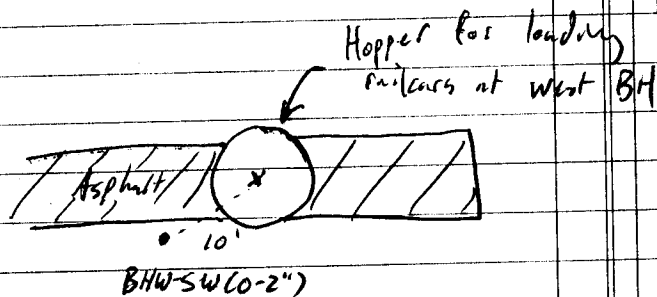
6/6/03

1300

Sampler:

Fritz

Composite soil sample collected from 0-2" interval from area 10' SW of hopper at west bayhouse. Could not sample directly west because of asphalt. Representative soil from top 2" collected by hand and put into disposable metal pic tray. Soil homogenized in pic tray then put into sample container to go to lab. Gloves and pic tray properly disposed of.



BHW-N710' (0-2")

6/6/03

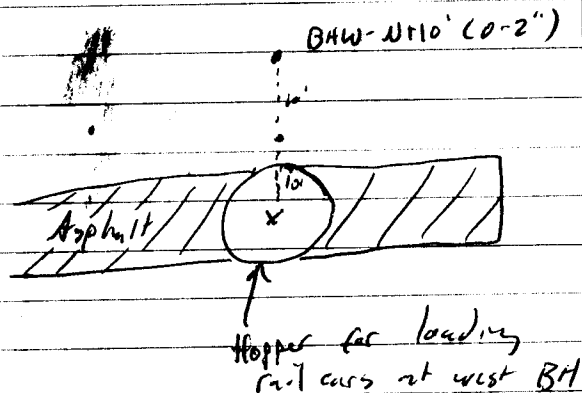
1345

Sampler:

Fite

Composite soil sample  
collected from 0-2" interval  
from area 10' north of  
sample location BHW-N (0-2")  
at west bay house.

Representative soil from  
0-2" collected by hand  
and put into disposable  
metal pie tray. Soil  
homogenized in pie tray  
then put into sample  
jar to go to lab.  
Gloves and pie tray  
properly disposed of.



BHW-S+10' (0-2")

6/6/03

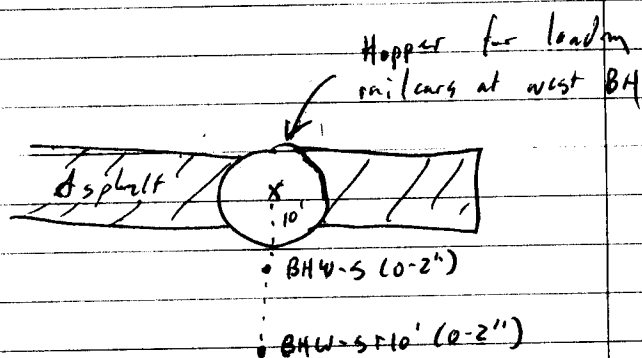
1330

Sampler:

F-18

Composite soil sample  
collected from 0-2" interval  
from area 10' south  
at sample location BHW-S+10' (0-2")  
at west baghouse.

Representative soil from 0-2"  
collected by hand and  
put into disposable  
metal pie tray. Soil  
homogenized in pie tray  
then put into sample  
jar to go to lab.  
Gloves and pie tray  
properly disposed of



BHW-S15' (0-2")

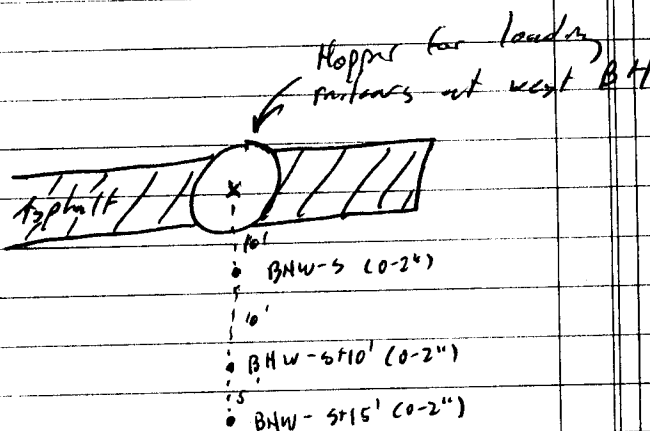
6/6/03

1345

Sampler:

Frite

Composite soil sample  
collected from 0-2" interval  
from area 5' south  
of sample location BHW-S10' (0-2")  
at west baghouse.  
Representative soil from  
top 2" collected by  
hand and put into  
disposable metal pie tray.  
Soil homogenized in pie  
tray then put into sample  
jar to go to lab.  
Gloves and pie tray  
properly disposed of.



• BHW-NW 10' (0-2")

6/6/03

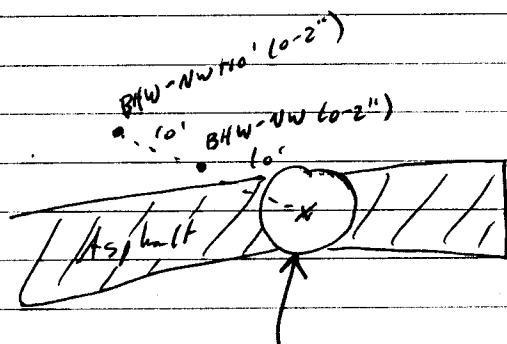
1400

Sampler:

Fritz

Composite soil sample  
collected from 0-2" interval  
from area 10' NW of  
sample location BHW-NW 10' (0-2")  
at west baghouse.

Representative soil from  
top 2" collected by  
hand and put into  
disposable metal pie tray.  
Soil homogenized in pie  
tray then put into  
sample jar to go to  
lab. Gloves and pie  
tray properly disposed of.



BHW-SW 10' (0-2")

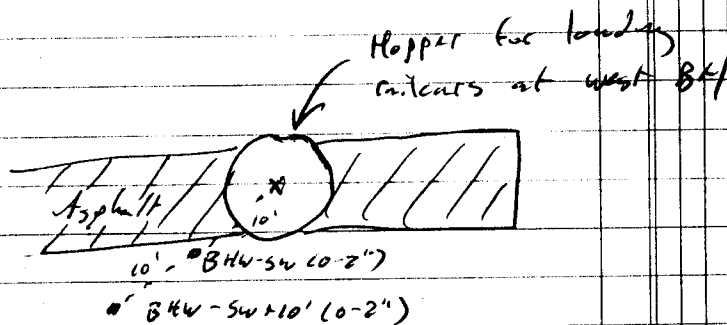
6/6/03

1415

Sampler:

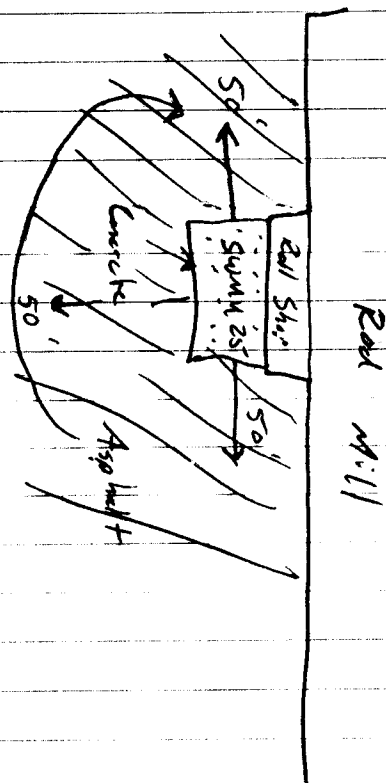
Frite

Composite soil sample collected from 0-2" interval from area 10' SW of sample location BHW-SW (0-2") at west baghouse. Representative soil from top 2" collected by hand and put into disposable metal pie tray. Soil homogenized in pie tray then put into sample jar to go to lab. Gloves and pie tray disposed of properly.



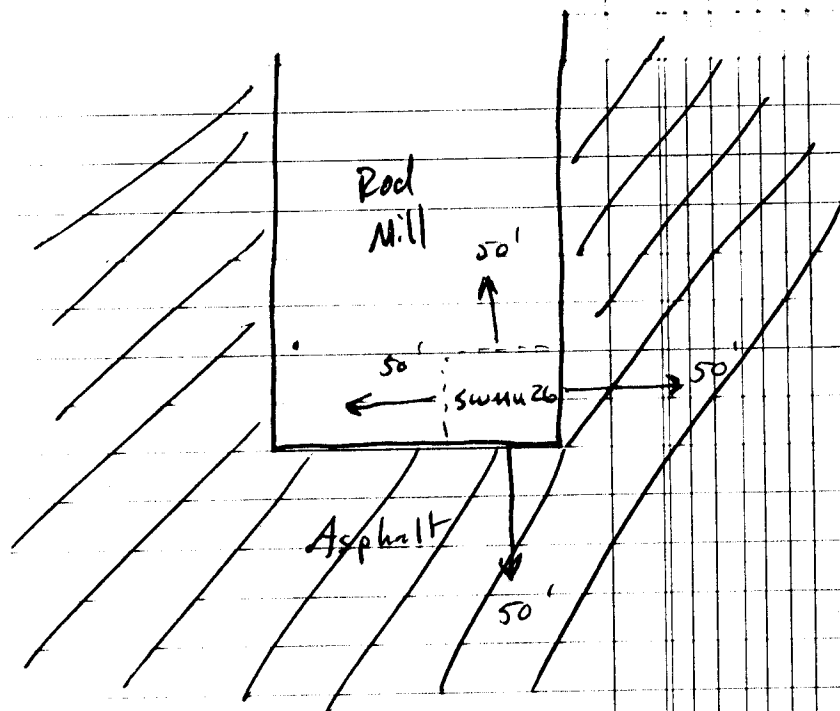


SWMU 25



No samples collected  
concrete covering SWMU and  
asphalt extending beyond 50'  
from perimeter of SWMU  
in all directions.

SWMU 26



No samples collected  
concrete covering SWMU  
located inside of SW  
corner of Rod Mill and  
asphalt covering ground  
surface adjacent to SWMU  
greater than 50' in all  
directions.

Appendix D  
Pace Analytical Lab Report

June 11, 2003

Mr. Mike Fritz  
COMPASS ENVIRONMENTAL INC  
8116 Wilson Rd.  
Kansas City, MO 64125

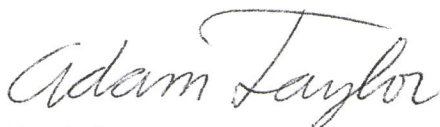
RE: Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Dear Mr. Fritz:

Enclosed are the analytical results for sample(s) received by the laboratory on June 6, 2003. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,



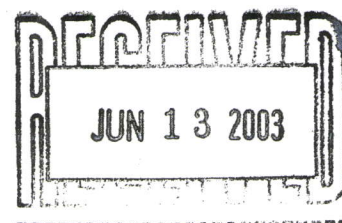
Adam Taylor  
adam.taylor@pacelabs.com  
Project Manager

Kansas/NELAP Certification Number E-10116

Enclosures

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

**Pace Analytical Services, Inc.**  
9608 Loiret Blvd.  
Lenexa, KS 66219  
Phone: 913.599.5665  
Fax: 913.599.1759

Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Project	Sample				
<u>Sample Number</u>	<u>Number</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
6071206-001	606134237	BHE-N(0-2")	Soil	06/06/03 10:00	06/06/03 14:30
6071206-002	606134245	BHE-E(0-2")	Soil	06/06/03 10:15	06/06/03 14:30
6071206-003	606134252	BHE-S(0-2")	Soil	06/06/03 10:30	06/06/03 14:30
6071206-004	606134260	BHE-W(0-2")	Soil	06/06/03 10:45	06/06/03 14:30
6071206-005	606134278	BHE-C(0-2")	Soil	06/06/03 11:00	06/06/03 14:30
6071206-006	606134286	BHE-N+10' (0-2")	Soil	06/06/03 11:15	06/06/03 14:30
6071206-007	606134294	FB-060603-1	Soil	06/06/03 10:05	06/06/03 14:30
6071206-008	606134302	BHW-N(0-2")	Soil	06/06/03 11:30	06/06/03 14:30
6071206-009	606134310	BHW-E(0-2")	Soil	06/06/03 11:45	06/06/03 14:30
6071206-010	606134328	BHW-S(0-2")	Soil	06/06/03 12:00	06/06/03 14:30
6071206-011	606134336	BHW-NW(0-2")	Soil	06/06/03 12:45	06/06/03 14:30
6071206-012	606134344	BHW-SW(0-2")	Soil	06/06/03 13:00	06/06/03 14:30
6071206-013	606134351	BHW-N+10' (0-2")	Soil	06/06/03 13:15	06/06/03 14:30
6071206-014	606134369	BHW-S+10' (0-2")	Soil	06/06/03 13:30	06/06/03 14:30
6071206-015	606134377	BHW-S+15' (0-2")	Soil	06/06/03 13:45	06/06/03 14:30
6071206-016	606134385	BHW-NW+10' (0-2")	Soil	06/06/03 14:00	06/06/03 14:30
6071206-017	606134393	BHW-SW+10' (0-2")	Soil	06/06/03 14:15	06/06/03 14:30
6071206-018	606134401	FB-060603-2(0-2")	Soil	06/06/03 11:50	06/06/03 14:30

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206

Client Project ID: BIG BLUE

Project			Analysis			Analytes
<u>Sample Number</u>	<u>Sample No</u>	<u>Client Sample ID</u>	<u>Code</u>	<u>Analysis Description</u>	<u>Reported</u>	
6071206-001	606134237	BHE-N(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-002	606134245	BHE-E(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-003	606134252	BHE-S(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-004	606134260	BHE-W(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-005	606134278	BHE-C(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-006	606134286	BHE-N+10' (0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-007	606134294	FB-060603-1	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-008	606134302	BHW-N(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-009	606134310	BHW-E(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-010	606134328	BHW-S(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-011	606134336	BHW-NW(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-012	606134344	BHW-SW(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-013	606134351	BHW-N+10' (0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-014	606134369	BHW-S+10' (0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-015	606134377	BHW-S+15' (0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-016	606134385	BHW-NW+10' (0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-017	606134393	BHW-SW+10' (0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	
6071206-018	606134401	FB-060603-2(0-2")	6010 SPAC	Metals-Standard ICP, Soil	3	

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Solid results are reported on a wet weight basis

Lab Sample No: 606134237	Project Sample Number: 6071206-001	Date Collected: 06/06/03 10:00
Client Sample ID: BHE-N(0-2")	Matrix: Soil	Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	22.4	mg/kg	0.420	0.8	06/10/03 21:00	SEL	7440-43-9		
Lead	1070	mg/kg	4.20	0.8	06/10/03 21:00	SEL	7439-92-1		
Date Digested	06/09/03				06/09/03				

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206

Client Project ID: BIG BLUE

Lab Sample No: 606134245  
Client Sample ID: BHE-E(0-2")

Project Sample Number: 6071206-002

Matrix: Soil

Date Collected: 06/06/03 10:15

Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	21.6	mg/kg	0.476	1.0	06/10/03 21:04	SEL	7440-43-9		
Lead	932.	mg/kg	4.76	1.0	06/10/03 21:04	SEL	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 2 of 21

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206

Client Project ID: BIG BLUE

Lab Sample No: 606134252	Project Sample Number: 6071206-003	Date Collected: 06/06/03 10:30
Client Sample ID: BHE-S(0-2")	Matrix: Soil	Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	83.9	mg/kg	0.442	0.9	06/10/03 21:09	SEL	7440-43-9		
Lead	3400	mg/kg	4.42	0.9	06/10/03 21:09	SEL	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 3 of 21

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Lab Sample No: 606134260 Project Sample Number: 6071206-004 Date Collected: 06/06/03 10:45  
Client Sample ID: BHE-W(0-2") Matrix: Soil Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	14.9	mg/kg	0.403	0.8	06/10/03 21:14	SEL	7440-43-9		
Lead	474.	mg/kg	4.03	0.8	06/10/03 21:14	SEL	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 4 of 21

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206

Client Project ID: BIG BLUE

Lab Sample No: 606134278

Project Sample Number: 6071206-005

Date Collected: 06/06/03 11:00

Client Sample ID: BHE-C(0-2")

Matrix: Soil

Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	71.2	mg/kg	0.490	1.0	06/10/03 21:18	SEL	7440-43-9		
Lead	3220	mg/kg	4.90	1.0	06/10/03 21:18	SEL	7439-92-1		
Date Digested	06/09/03				06/09/03				

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Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Lab Sample No: 606134286      Project Sample Number: 6071206-006      Date Collected: 06/06/03 11:15  
Client Sample ID: BHE-N+10'(0-2")      Matrix: Soil      Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	88.3	mg/kg	0.455	0.9	06/10/03 21:23	SEL	7440-43-9		
Lead	3740	mg/kg	4.55	0.9	06/10/03 21:23	SEL	7439-92-1		
Date Digested	06/09/03				06/09/03				

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Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Lab Sample No: 606134294	Project Sample Number: 6071206-007	Date Collected: 06/06/03 10:05
Client Sample ID: FB-060603-1	Matrix: Soil	Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	11.3	mg/kg	0.394	0.8	06/10/03 21:27	SEL	7440-43-9		
Lead	489.	mg/kg	3.94	0.8	06/10/03 21:27	SEL	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 7 of 21

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Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Lab Sample No: 606134302      Project Sample Number: 6071206-008      Date Collected: 06/06/03 11:30  
Client Sample ID: BHW-N(0-2")      Matrix: Soil      Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	149.	mg/kg	0.446	0.9	06/10/03 21:32	SEL	7440-43-9		
Lead	5920	mg/kg	4.46	0.9	06/10/03 21:32	SEL	7439-92-1		
Date Digested	06/09/03				06/09/03				

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206

Client Project ID: BIG BLUE

Lab Sample No: 606134310

Client Sample ID: BHW-E(0-2")

Project Sample Number: 6071206-009

Matrix: Soil

Date Collected: 06/06/03 11:45

Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	148.	mg/kg	0.431	0.9	06/10/03 21:37	SEL	7440-43-9		
Lead	5490	mg/kg	4.31	0.9	06/10/03 21:37	SEL	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 9 of 21

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206

Client Project ID: BIG BLUE

Lab Sample No: 606134328

Project Sample Number: 6071206-010

Date Collected: 06/06/03 12:00

Client Sample ID: BHW-S(0-2")

Matrix: Soil

Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	186.	mg/kg	0.427	0.9	06/10/03 21:41	SEL	7440-43-9		
Lead	7570	mg/kg	4.27	0.9	06/10/03 21:41	SEL	7439-92-1		
Date Digested	06/09/03				06/09/03				

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Lab Project Number: 6071206

Client Project ID: BIG BLUE

Lab Sample No: 606134336	Project Sample Number: 6071206-011	Date Collected: 06/06/03 12:45
Client Sample ID: BHW-NW(0-2")	Matrix: Soil	Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	46.6	mg/kg	0.400	0.8	06/11/03	JAH	7440-43-9		
Lead	1150	mg/kg	4.00	0.8	06/11/03	JAH	7439-92-1		
Date Digested	06/09/03				06/09/03				

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Lab Sample No: 606134344	Project Sample Number: 6071206-012	Date Collected: 06/06/03 13:00
Client Sample ID: BHW-SW(0-2")	Matrix: Soil	Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	85.2	mg/kg	0.476	1.0	06/11/03	JAH	7440-43-9		
Lead	1790	mg/kg	4.76	1.0	06/11/03	JAH	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 12 of 21

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Lab Sample No: 606134351      Project Sample Number: 6071206-013      Date Collected: 06/06/03 13:15  
Client Sample ID: BHW-N+10'(0-2")      Matrix: Soil      Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	14.7	mg/kg	0.420	0.8	06/11/03	JAH	7440-43-9		
Lead	361.	mg/kg	4.20	0.8	06/11/03	JAH	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 13 of 21

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Lab Sample No: 606134369 Project Sample Number: 6071206-014 Date Collected: 06/06/03 13:30  
Client Sample ID: BHW-S+10'(0-2") Matrix: Soil Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	136.	mg/kg	0.424	0.8	06/11/03	JAH	7440-43-9		
Lead	4920	mg/kg	4.24	0.8	06/11/03	JAH	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 14 of 21

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206

Client Project ID: BIG BLUE

Lab Sample No: 606134377

Project Sample Number: 6071206-015

Date Collected: 06/06/03 13:45

Client Sample ID: BHW-S+15'(0-2")

Matrix: Soil

Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	42.3	mg/kg	0.467	0.9	06/11/03	JAH	7440-43-9		
Lead	792.	mg/kg	4.67	0.9	06/11/03	JAH	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 15 of 21

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Lab Sample No: 606134385      Project Sample Number: 6071206-016      Date Collected: 06/06/03 14:00  
Client Sample ID: BHW-NW+10'(0-2")      Matrix: Soil      Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	26.0	mg/kg	0.435	0.9	06/11/03	JAH	7440-43-9		
Lead	271.	mg/kg	4.35	0.9	06/11/03	JAH	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 16 of 21

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206

Client Project ID: BIG BLUE

Lab Sample No: 606134393	Project Sample Number: 6071206-017	Date Collected: 06/06/03 14:15
Client Sample ID: BHW-SW+10'(0-2")	Matrix: Soil	Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	39.8	mg/kg	0.485	1.0	06/11/03	JAH	7440-43-9		
Lead	425.	mg/kg	4.85	1.0	06/11/03	JAH	7439-92-1		
Date Digested	06/09/03				06/09/03				

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206  
Client Project ID: BIG BLUE

Lab Sample No: 606134401      Project Sample Number: 6071206-018      Date Collected: 06/06/03 11:50  
Client Sample ID: FB-060603-2(0-2")      Matrix: Soil      Date Received: 06/06/03 14:30

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
<b>Metals</b>									
Metals-Standard ICP, Soil	Prep/Method: EPA 3050 / EPA 6010								
Cadmium	164.	mg/kg	0.455	0.9	06/11/03	JAH	7440-43-9		
Lead	5360	mg/kg	4.55	0.9	06/11/03	JAH	7439-92-1		
Date Digested	06/09/03				06/09/03				

Date: 06/11/03

Page: 18 of 21

## REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6071206

Client Project ID: BIG BLUE

---

## PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Lab Project Number: 6071206  
Client Project ID: BIG BLUE

QC Batch: 146457  
QC Batch Method: EPA 3050  
Analysis Method: EPA 6010  
Analysis Description: Metals-Standard ICP, Soil  
Associated Lab Samples:

606134237	606134245	606134252	606134260	606134278
606134286	606134294	606134302	606134310	606134328
606134336	606134344	606134351	606134369	606134377
606134385	606134393	606134401		

METHOD BLANK: 606136794  
Associated Lab Samples:

606134237	606134245	606134252	606134260	606134278	606134286	606134294
606134302	606134310	606134328	606134336	606134344	606134351	606134369
606134377	606134385	606134393	606134401			

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Cadmium	mg/kg	ND	0.459	
Lead	mg/kg	ND	4.59	

### LABORATORY CONTROL SAMPLE: 606136802

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Cadmium	mg/kg	9.091	8.300	91	80-120	
Lead	mg/kg	90.91	89.55	98	80-120	

### MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 606136810 606136828

Parameter	Units	606134237 Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Footnote
Cadmium	mg/kg	22.44	9.259	30.83	46.49	91	274	75-125	40	20	1,2
Lead	mg/kg	1067	92.59	1102	1772	37	803	75-125	47	20	1,2

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc.

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## QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

- LCS(D) Laboratory Control Sample (Duplicate)  
MS(D) Matrix Spike (Duplicate)  
DUP Sample Duplicate  
ND Not detected at or above adjusted reporting limit  
NC Not Calculable  
J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit  
MDL Adjusted Method Detection Limit  
RPD Relative Percent Difference  
[1] The sample matrix affected the Matrix Spike and Matrix Spike Duplicate (MS/MSD) compound recovery. The successful recovery of the Laboratory Control Sample (LCS) demonstrates the analytical system was in control for this QA/QC sample group.  
[2] The calculated RPD was outside QC acceptance limits. Acceptable recovery of the LCS indicates the analytical system was in control.

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc.

671465

## Required Client Information: Section A

Company: Compass Bio Blue

Address: 816 W. 1st St.  
Kansas City, MO 64125

Phone: (816) 241-7300 Fax: (816) 241-7304

## Required Client Information: Section B

Report To: Mike Fritz

Copy To:

Invoice To: Maricela Perez

P.O. 1345

Project Name: Big Blue

Project Number:

Page: 1 of 2

## Client Information (Check quote/contract):

Requested Due Date: 6/10/03 TAT: 48 Hrs.

\* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.

Turn Around Time (TAT) in calendar days.

## To Be Completed by Pace Analytical and Client Section C

Quote Reference:

Project Manager:

Project #: 6071206

Profile #:

Requested Analysis:

ITEM #	Section D Required Client Information:										Valid Matrix Codes		DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Preservatives							Remarks / Lab																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	SAMPLE ID One character per box. (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE										MATRIX	CODE				Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol		Other																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIN
					<u>278</u>	<u>6/6/03</u>	<u>1430</u>	<u>76</u>	<u>6-6-03</u>	<u>111</u>

**SAMPLE CONDITION**

Temp in °C 14.4

Received on Ice Y/N

Sealed Cooler Y/N

Samples Intact Y/N

**SAMPLE NOTES**

Please note sample interval is (0-2")

↑ inches

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed: (MM / DD / YY)

Additional Comments:



# CHA OF-CUSTODY / Analytical Request Document

The Chain of Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

## Required Client Information: Section A

Company: Compass Big Blue  
Address: 8116 Wilson Rd.  
Kansas City, Mo 64125  
Phone: (816) 241-7300 Fax: (816) 241-7304

## Required Client Information: Section B

Report To: Mike Fritz  
Copy To:  
Invoice To: Maricela Perez  
P.O. 1345  
Project Name: Big Blue  
Project Number:

Page: 2 of 2

671463

## To Be Completed by Pace Analytical and Client Section C

Quote Reference:  
Project Manager:  
Project #:  
Profile #:  
Requested Analysis:

Client Information (Check quote/contract):  
Requested Due Date: 6/10/03 \*TAT: 48 Hr.  
\* Turn around times less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.  
Turn Around Time (TAT) in calendar days.

ITEM #	Section D										Required Client Information:										Valid Matrix Codes										DATE COLLECTED mm / dd / yy	TIME COLLECTED hh:mm a/p	# Containers	Preservatives							Requested Analysis:										Remarks / Lab																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
	SAMPLE ID One character per box. (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE										MATRIX CODE MATRIX WATER SOIL OIL WIPE AIR TISSUE OTHER CODE WT SL OL WP AR TS OT										Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol	Other	Total Lead (6010) Total Cadmium (6010)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM NUMBER	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
					<u>Mike Fritz</u>	<u>6/6/03</u>	<u>1430</u>	<u>MARICELA PEREZ</u>	<u>6-6-03</u>	<u>14</u>

**SAMPLE CONDITION**  
Temp in °C 11.4  
Received on Ice Y/N  
Sealed Cooler Y/N  
Samples Intact Y/N

**SAMPLE NOTES**  
Please note sample interval is 10-2"  
↑ inches

**SAMPLER NAME AND SIGNATURE**  
PRINT Name of SAMPLER:  
SIGNATURE of SAMPLER:  
DATE Signed: / /



Appendix E  
Photos







